

Human Cochlin / COCH Protein (short isoform, His Tag)

Catalog Number: 11368-H07HS



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

COCH-5B2; COCH5B2; DFNA9; AW122937; Coch-5B2; D12H14S564E

Protein Construction:

A DNA sequence encoding the mature form of human COCH (NP_001128530.1) (Glu 25-Gln 550) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant full length of human COCH consists of 542 amino acids and has a calculated molecular mass of 59.4 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhCOCH is approximately 18 kDa, corresponding to the alternative splicing short isoform, which lacks two VWFA domains.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

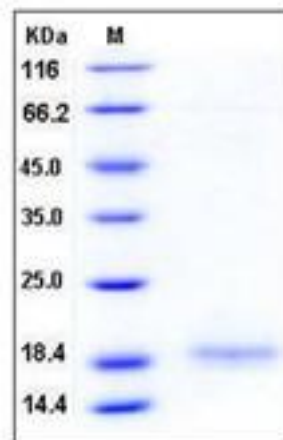
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cochlin, also known as COCH-5B2 and COCH, is a secreted protein which contains one LCCL domain and two VWFA domains. It is an abundant inner ear protein expressed as multiple isoforms. Its function is also unknown, but it is suspected to be an extracellular matrix component. Cochlin and type II collagen are major constituents of the inner ear extracellular matrix, and Cochlin constitutes 70% of non-collagenous protein in the inner ear, the cochlin isoforms can be classified into three subgroups, p63s, p44s and p40s. The expression of cochlin is highly specific to the inner ear. Eleven missense mutation and one in-frame deletion have been reported in the COCH gene, causing hereditary progressive sensorineural hearing loss and vestibular dysfunction, deafness autosomal dominant type 9 (DFNA9). The co-localization of cochlin and type II collagen in the fibrillar substance in the subepithelial area indicate that cochlin may play a role in the structural homeostasis of the vestibule acting in concert with the fibrillar type II collagen bundles. Defects in COCH may contribute to Meniere disease which is an autosomal dominant disorder characterized by hearing loss associated with episodic vertigo.

References

1. Ikezono T, *et al.* (2005) Expression of cochlin in the vestibular organ of rats. *ORL J Otorhinolaryngol Relat Spec.* 67(5): 252-8.
2. Shindo S, *et al.* (2008) Spatiotemporal expression of cochlin in the inner ear of rats during postnatal development. *Neurosci Lett.* 444(2): 148-52.
3. Hosokawa S, *et al.* (2010) Ultrastructural localization of cochlin in the rat cochlear duct. *Audiol Neurotol.* 15(4): 247-53.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>